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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,181	01/21/2004	Kia Silverbrook	MPA33US	2065
24011	7590	03/13/2006	EXAMINER	
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, NSW 2041 AUSTRALIA			GOLDBERG, BRIAN J	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/760,181

Applicant(s)

SILVERBROOK ET AL.

Examiner

Brian Goldberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon in view of Phillips (US 6626708). Cannon discloses "a printed circuit board (120 of Fig 3) comprising a spring portion (180 of Fig 3)." Thus Cannon meets the claimed invention except the spring portion being "integrally formed within the material of the printed circuit board, the spring portion being arranged with edge electrical connections of the printed circuit board."

3. Phillips teaches a spring portion "integrally formed within the material of the printed circuit board, the spring portion (8) being arranged with edge electrical connections of the printed circuit board (see Fig 5)." It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to make the spring portion integrally formed with the material of the printed circuit board. One would have been motivated to so modify Cannon for the benefit of decreasing the number of parts involved, and therefore, simplifying production.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon in view of Phillips and further in view of Tomura et al. Cannon in view of Phillips

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discloses the claimed invention as set forth above with respect to claim 1. Thus Cannon in view of Phillips meets the claimed invention except “wherein the integrally formed spring portion is formed by removing a section.”

5. Tomura et al. teach providing a spring portion “formed by removing a section (Figs 27A and 27B).” It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to form the spring portion by removing a section. One would have been motivated to so modify Cannon in view of Phillips by using the spring portion disclosed by Tomura et al. for the benefit of reducing the materials required for the printed circuit board as well as reducing its weight.

6. Claims 3, 4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. in view of Cannon and further in view of Phillips. Silverbrook et al disclose “a plurality of first printed circuit boards arranged in a linearly aligned manner (18 of Fig 4); a second printed circuit board (22 and 48 of Fig 8) arranged at one end of the linearly aligned first printed circuit boards for connecting electronics supported by the plurality of first printed circuit boards to power and data supplied (col 2 ln 56-58); and a third printed circuit board (54 of Fig 3) arranged at the other end of the linearly aligned first printed circuit boards...at least one printhead module (10 of Fig 3) comprising at least two printhead integrated circuits (18 of Fig 4), each of which has nozzles formed therein for delivering printing fluid onto the surface of print media (pg 5 ln 19), a support member (16 of Fig 3) supporting and carrying the printing fluid for the at least two printhead integrated circuits, and an electrical connector (48 of Fig 8) for connecting electrical signals to the at least two printhead integrated circuits (pg 3 ln 17);

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a casing (14 of Fig 3) comprising a support frame (64, 94 and 32 and 76 about 16 of Fig 2) on which the at least one printhead module and the circuit assembly are removable mounted...the at least one printhead module (10 of Fig 2) is formed as a unitary arrangement of the at least two printhead integrated circuits (18 of Fig 4), the support member (16 of Fig 7), and at least one fluid distribution member (26 of Fig 7) mounting the at least two printhead integrated circuits to the support member; and the support member has at least one longitudinally extending channel (80 of Fig 7) for carrying the printing fluid for the printhead integrated circuits and includes a plurality of apertures (42 of Fig 7) extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (see Fig 7 and pg 5 ln 19)." Thus Silverbrook et al. meet the claimed invention except "the third printed circuit board being a printed circuit board in accordance with claim 1" and "a circuit assembly according to claim 3."

7. Cannon in view of Phillips teaches "a printed circuit board in accordance with claim 1" as set forth above with respect to claim 1. Thus the Cannon in view of Phillips and Silverbrook et al. combination satisfies "a circuit assembly according to claim 3" as set forth above. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide "a printed circuit board comprising an integrally formed spring portion." One would have been motivated to so modify Silverbrook et al. by substituting the printed circuit board disclosed by Cannon in view of Phillips in place of the third printed circuit board disclosed by Silverbrook et al. for the benefit of ensuring

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that electrical contacts are maintained due to the force provided by the spring as stated by Cannon.

Allowable Subject Matter

1. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose or suggest "the second and third printed circuit boards of the circuit assemble being arranged at the respective longitudinal ends of the support frame" in combination with the remaining claim elements as set forth in claim 5 and dependent claim 6.

Response to Arguments

2. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's arguments regarding claims 2-4 and 7 have been fully considered but they are not persuasive. Applicant is only arguing that because these claims are dependent upon claim 1, they are allowable.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goldberg whose telephone number is 571-272-2728. The examiner can normally be reached on Monday through Friday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJG



March 1, 2006

Binh Nguyen
Primary Examiner
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